

Photon Updates

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Princeton

16 Sept 2025

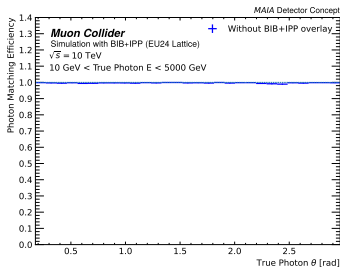
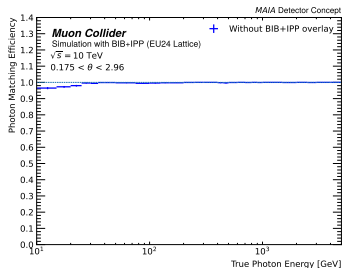


Overview

- ▶ Latest no-BIB photon samples located on OSG at
`/data/DataMuC_MAIA_v0/v6/reco/photonGun*`
 - ▶ Samples with BIB still copying over, replace `/reco/` with `/recoBIB/` in the filepath
- ▶ Made with:
 - ▶ Latest software
 - ▶ FTFP_BERT_HP (thanks JP!)
 - ▶ Larry-style Pandora
 - ▶ 300ps timing cuts (thanks Alyna + Kiley!)

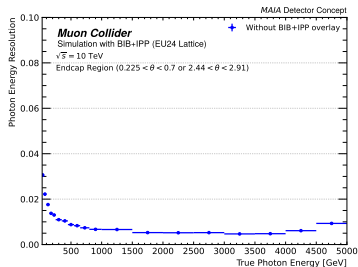
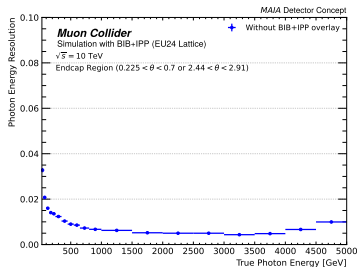
Efficiency

Matching efficiency plotted against energy (left) and theta (right). All looks good (note log scale on energy axis at left so we can see the features).



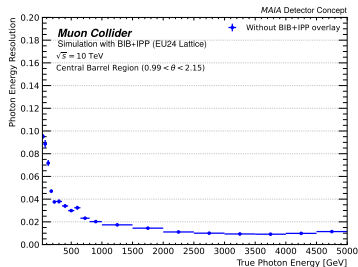
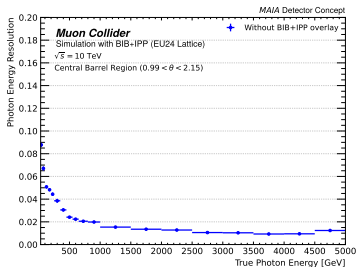
Resolution (Endcaps)

Energy resolution in the endcap region, comparing v6 with timing cuts (left) to v5 with no fragment removal (right). Both resolution curves are uncalibrated.



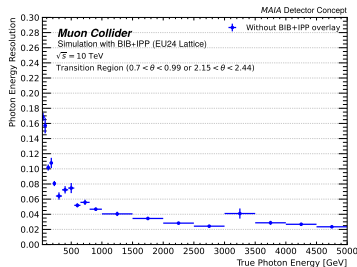
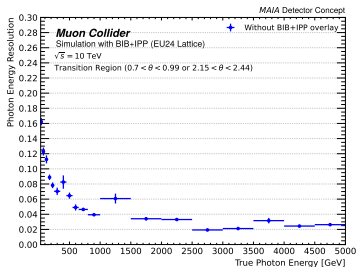
Resolution (Barrel)

Energy resolution in the barrel region, comparing v6 with timing cuts (left) to v5 with no fragment removal (right). Both resolution curves are uncalibrated.

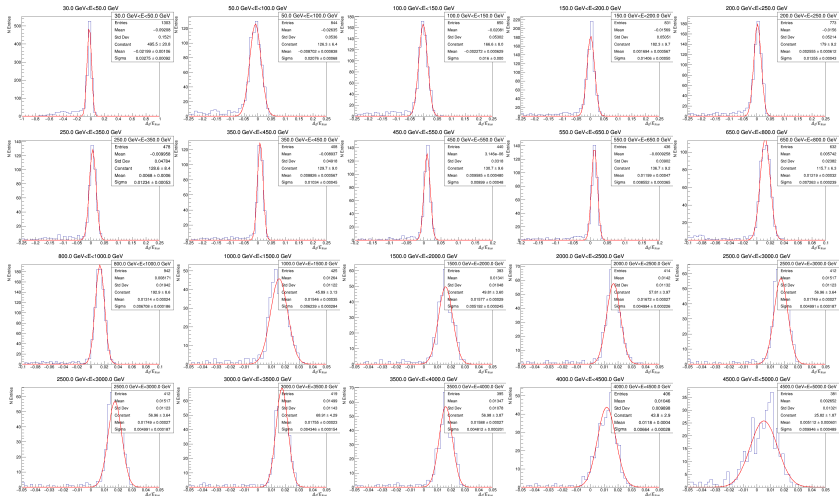


Resolution (Transition Region)

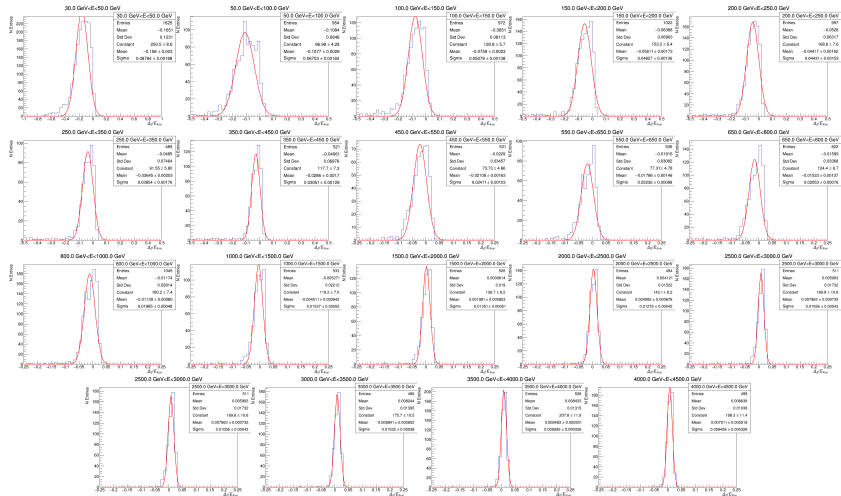
Energy resolution in the transition region, comparing v6 with timing cuts (left) to v5 with no fragment removal (right). Both resolution curves are uncalibrated.



Gaussian Slices (Endcaps – uncalibrated)



Gaussian Slices (Barrel – uncalibrated)



Gaussian Slices (Transition – uncalibrated)

